Please **ADD** new claims 21 - 48 as follows.

--21. A computer system, comprising:

a microprocessor, said microprocessor operates in accordance with a clock signal having a controllable frequency;

a fan; and

a thermal management controller operatively connected to said microprocessor and said fan, said thermal management controller operates to thermally manage said microprocessor in accordance with one of a first cooling mode and a second cooling mode, the first cooling mode involving use of said fan for cooling said microprocessor, and the second cooling mode involving reduction in the controllable frequency of the clock signal for cooling said microprocessor.

22. A computer system as recited in claim 21, wherein said fan has multiple speeds of operation, and

wherein, with the first cooling mode, said thermal management controller causes said fan to operate at higher of the speeds as needed to provided additional thermal cooling.

23. A computer system as recited in claim 21, wherein said microprocessor has a sleep mode in which the controllable frequency of the clock is substantially reduced, and

wherein said thermal management controller ensures that said fan is deactivated when said microprocessor is in the sleep mode.

24. A computer system as recited in claim 21, wherein, with the second cooling mode, said thermal management controller causes the controllable

frequency of the clock to be successively reduced as needed to provided additional cooling.

25. A computer system as recited in claim 21, wherein, with the first cooling mode, said thermal management controller causes said fan to operate at successively higher speeds as needed to provided additional cooling.

26. A computer system as recited in claim 21, wherein said microprocessor has a sleep mode in which the controllable frequency of the clock is substantially reduced, and

wherein said thermal management controller ensures that said fan is deactivated when said microprocessor is in the sleep mode.

27. A computer system as recited in claim 21, wherein the first cooling mode serves to operate the computer for high performance operation, and the second cooling mode serves to conserve battery energy by operating the computer with reduced performance operation.

28. A computer, comprising:

a microprocessor that operates in accordance with a clock, the clock having a controllable frequency;

a temperature sensor that measures a temperature;

a fan; and

a thermal controller for providing thermal management of said computer, said thermal controller has a first cooling mode and a second cooling mode, the controllable frequency of the clock is reduced to regulate thermal conditions when in the first cooling mode, and said fan is activated to regulate thermal conditions when in the second cooling mode.

29. A computer as recited in claim 28, wherein the first cooling mode is a reduced power mode and the second cooling mode is a performance mode.

Sub B3

30. A computer as recited in claim 28, wherein said temperature sensor measures the temperature of said microprocessor.

31. A computer as recited in claim 30, wherein said temperature sensor is integral with said microprocessor.

32. A computer as recited in claim 28,

wherein when said thermal controller operates in the first cooling mode, the controlled frequency of the clock is reduced when the temperature exceeds a first temperature threshold, and

wherein when said thermal controller operates in the second cooling mode, said fan is activated when the temperature exceeds a second temperature threshold.

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~~33~~. A computer as recited in claim ~~32~~, wherein said microprocessor has a sleep mode in which the controlled frequency of the clock is substantially reduced, and

wherein when said microprocessor is in the sleep mode said controller ensures that said fan is deactivated regardless of thermal conditions.

Sub B4

34. A computer as recited in claim 28, wherein said microprocessor has a sleep mode in which the controlled frequency of the clock is substantially reduced, and

wherein said controller ensures that said fan is deactivated when said microprocessor is in the sleep mode.

35. A computer as recited in claim 28, wherein when said thermal controller operates in the first cooling mode, the controllable frequency of the clock is gradually and successively reduced as needed to regulate thermal conditions.

36. A computer as recited in claim 28, wherein when said thermal controller operates in the first cooling mode, the controllable frequency of the clock is dependent on the temperature measured by said temperature sensor.

37. A computer as recited in claim 28,

wherein said fan is a variable-speed fan, and

wherein when said thermal controller operates in the second cooling mode, the speed of said fan is gradually increased as needed to regulate thermal conditions.

38. A computer as recited in claim 28,

wherein said fan is a variable-speed fan, and

wherein when said thermal controller operates in the second cooling mode, the speed of said fan is dependent on the temperature measured by said temperature sensor.

39. A computer as recited in claim 28, wherein said computer consumes reduced energy when in the first cooling mode than when in the second cooling mode, and wherein said computer operates at higher performance when in the second cooling mode than when in the first cooling mode.

40. A computer as recited in claim 28, wherein in the first cooling mode cooling of said microprocessor is achieved primarily through reduction in clock

frequency for said microprocessor, and wherein in the second cooling mode cooling said microprocessor is achieved primarily through use of said fan.

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~~41~~. A computer as recited in claim ~~40~~, wherein, in the first cooling mode, when further cooling of said microprocessor is needed beyond that provided by the reduction in the clock frequency, then said fan is activated to provide supplemental cooling of said microprocessor.

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~~42~~. A computer as recited in claim ~~40~~, wherein, in the second cooling mode, when further cooling of said microprocessor is needed beyond that provided by said fan, then the clock frequency for said microprocessor can be reduced to provide supplemental cooling of said microprocessor.

43. A computer, comprising:

a microprocessor that operates in accordance with a clock, the clock having a controllable frequency;

a temperature sensor that measures a temperature;

a fan;

a thermal controller for providing thermal management of said computer, said thermal controller has a first cooling mode and a second cooling mode,

wherein when said thermal controller operates in the first cooling mode, the controllable frequency of the clock is reduced to provide thermal management when the temperature exceeds a temperature threshold, and

wherein when said thermal controller operates in the second cooling mode, said fan is activated to provide thermal management when the temperature exceeds a temperature threshold.

Sub B5

44. A computer as recited in claim 43, wherein in the first cooling mode the reduction in the controllable frequency is the primary thermal management method, and in the second cooling mode said fan is the primary thermal management method.

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45. A computer as recited in claim 14, wherein in the first cooling mode said fan is the secondary thermal management method used when further cooling is needed, and in the second cooling mode the reduction in the controllable frequency is the secondary thermal management method when further cooling is needed.

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46. A computer as recited in claim 43, wherein the temperature sensor is integral to said microprocessor and operates to sense the temperature of said microprocessor.

Sub B6

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47. A computer as recited in claim 43, wherein when said thermal controller operates in the first cooling mode, the controllable frequency of the clock is gradually and successively stepwise reduced as needed to regulate thermal conditions.

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48. A computer system, comprising:

a microprocessor, said microprocessor operating to perform operations in accordance with a clocking frequency;

a fan;

a temperature sensor that provides a temperature indication; and

a thermal manager operatively connected to said microprocessor and said fan, said thermal manager being configured to receive the temperature indication from said temperature sensor, and said thermal manager compares the temperature indication to first and second temperature thresholds, causes the clocking frequency for said microprocessor to be reduced to provide